

Amendments to the Claims:

1-25. (Canceled)

26. (New) A process for reducing carbon monoxide emissions in flue gasses produced using a blue flame burner, the process comprising:

providing the blue flame burner with fuel comprising a first sufficient quantity of a

Fischer Tropsch product comprising a second sufficient quantity of iso-paraffins and normal paraffins;

burning the fuel under conditions comprising a lambda of from about 1.05 to about 1.2;

wherein the first sufficient quantity, the second sufficient quantity, and the conditions produce flue gasses comprising less carbon monoxide than flue gasses produced under the same conditions using a petroleum derived gas oil as the fuel.

27. (New) The process of claim 26 wherein the second sufficient quantity is about 80 wt.% or more.

28. (New) The process of claim 26 wherein the first sufficient quantity is about 40 wt.% or more.

29. (New) The process of claim 26 wherein the first sufficient quantity is about 60 wt.% or more.

30. (New) The process of claim 26 wherein the first sufficient quantity is about 80 wt.% or more.

31. (New) The process of claim 27 wherein the first sufficient quantity is about 40 wt.% or more.

32. (New) The process of claim 27 wherein the first sufficient quantity is about 60 wt.% or more.

33. (New) The process of claim 27 wherein the first sufficient quantity is about 80 wt.% or more.

34. (New) The process of claim 26 further comprising heating water with the flue gasses by indirect heat exchange in a boiler.

35. (New) The process of claim 26 further comprising directly heating a space with the flue gasses.

36. (New) The process of claim 26 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 400 °C.
37. (New) The process of claim 26 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 370 °C.
38. (New) The process of claim 26 wherein the burning produces a flame, the process further comprising accurately detecting the flame over time using an ionization sensor.
39. (New) A process for reducing carbon monoxide emissions in flue gasses produced using a blue flame burner, the process comprising:
- providing the blue flame burner with fuel comprising about 40 wt.% or more of a Fischer Tropsch product comprising about 80 wt.% or more of iso-paraffins and normal paraffins;
 - burning the fuel under conditions comprising a lambda of from about 1.05 to about 1.2 and producing an amount of energy and flue gasses comprising less carbon monoxide than flue gasses produced under the same conditions using a petroleum derived gas oil as fuel.
40. (New) The process of claim 39 wherein the fuel comprises about 60 wt.% or more of the Fischer Tropsch product.
41. (New) The process of claim 39 wherein the fuel comprises about 80 wt.% or more of the Fischer Tropsch product.
42. (New) The process of claim 39 further comprising heating water with the flue gasses by indirect heat exchange in a boiler.
43. (New) The process of claim 39 further comprising directly heating a space with the flue gasses.
44. (New) The process of claim 39 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 400 °C.
45. (New) The process of claim 39 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 370 °C.
46. (New) The process of claim 39 wherein the burning produces a flame, the process further comprising accurately detecting the flame over time using an ionization sensor.

44. (New) A process for reducing carbon monoxide emissions in flue gasses produced using a blue flame burner, the process comprising:

providing the blue flame burner with fuel comprising a first sufficient quantity of a Fischer Tropsch gas oil product comprising a second sufficient quantity of iso-paraffins and normal paraffins;

burning the fuel under conditions comprising a lambda of from about 1 to about 1.6;

wherein the conditions, the first sufficient quantity, and the second sufficient quantity are effective to produce flue gasses comprising less carbon monoxide than flue gasses produced under the same conditions using a petroleum derived gas oil as the fuel.

46. (New) The process of claim 44 wherein the second sufficient quantity is about 80 wt. %.

47. (New) The process of claim 46 wherein the first sufficient quantity is about 40 wt.% or more.

48. (New) The process of claim 46 wherein the first sufficient quantity is about 60 wt.% or more.

49. (New) The process of claim 46 wherein the first sufficient quantity is about 80 wt.% or more.

50. (New) The process of claim 44 further comprising heating water with the flue gasses by indirect heat exchange in a boiler.

51. (New) The process of claim 44 further comprising directly heating a space with the flue gasses.

52. (New) The process of claim 44 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 400 °C.

53. (New) The process of claim 44 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 370 °C.

54. (New) The process of claim 44 wherein the burning produces a flame, the process further comprising accurately detecting the flame over time using an ionization sensor.

55. (New) A process for reducing carbon monoxide emissions in flue gasses produced using a blue flame burner, the process comprising:

providing the blue flame burner with fuel consisting essentially of a Fischer Tropsch

product comprising a quantity of iso-paraffins and normal paraffins;
burning the fuel under conditions comprising a lambda of from about 1.05 to about 1.2,
the conditions being effective to produce an amount of energy and flue gasses
comprising less carbon monoxide than flue gasses produced under the same
conditions using a petroleum derived gas oil as the fuel.

56. (New) The process of claim 55 wherein the quantity is about 80 wt.% or more.
57. (New) The process of claim 55 further comprising heating water with the flue gasses by indirect heat exchange in a boiler.
58. (New) The process of claim 55 further comprising directly heating a space with the flue gasses.
59. (New) The process of claim 55 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 400 °C.
60. (New) The process of claim 55 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 370 °C.
61. (New) The process of claim 55 wherein the burning produces a flame, the process further comprising accurately detecting the flame over time using an ionization sensor.
62. (New) A process for directly heating a space with flue gasses produced burning a liquid fuel using a blue flame burner, the process comprising:
providing the blue flame burner with liquid fuel comprising a first sufficient quantity of a Fischer Tropsch product comprising a second sufficient quantity of iso-paraffins and normal paraffins;
burning the fuel under conditions effective to produce an amount of energy and flue gasses; and,
directly heating a space with the flue gasses.
63. (New) The process of claim 62 wherein the conditions comprise a lambda of from about 1 to about 1.6, and the liquid fuel is a Fischer-Tropsch derived gas oil.
64. (New) The process of claim 62 wherein the conditions comprise a lambda of from about 1.05 to about 1.2 and the liquid fuel is selected from the group consisting of a Fischer-Tropsch derived gas oil and a Fischer-Tropsch derived kerosene.

65. (New) The process of claim 62 wherein the second sufficient quantity is about 80 wt.% or more.
66. (New) The process of claim 62 wherein the first sufficient quantity is about 40 wt.% or more.
67. (New) The process of claim 62 wherein the first sufficient quantity is about 60 wt.% or more.
68. (New) The process of claim 62 wherein the first sufficient quantity is about 80 wt.% or more.
69. (New) The process of claim 62 wherein the fuel consists essentially of the Fischer Tropsch product.
70. (New) The process of claim 65 wherein the first sufficient quantity is about 40 wt.% or more.
71. (New) The process of claim 65 wherein the first sufficient quantity is about 60 wt.% or more.
72. (New) The process of claim 65 wherein the first sufficient quantity is about 80 wt.% or more.
73. (New) The process of claim 65 wherein the fuel consists essentially of the Fischer Tropsch product.
74. (New) The process of claim 62 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 400 °C.
75. (New) The process of claim 62 wherein 90 wt.% or more of the Fischer-Tropsch-derived fuel boils at a temperature in a range of between about 160 °C and about 370 °C.
76. (New) The process of claim 62 wherein the burning produces a flame, the process further comprising accurately detecting the flame over time using an ionization sensor.